Stormwater Technical Information Report
For Small Sites

Project Name:

Project Address: 7808 123rd Ave. NE Kirkland, WA

Parcel Number(s): 092505-9017

Name of Developer/Owner: Ahmet Kulaga

Name of Professional Preparing TIR: Maher Welaye, PE

Address: 15516 56th Ave. W Edmonds, WA 98026

Phone Number: 206-816-0455

Report Date: October 6, 2014

This box to be completed by COK staff	
PERMIT #	

Project Overview

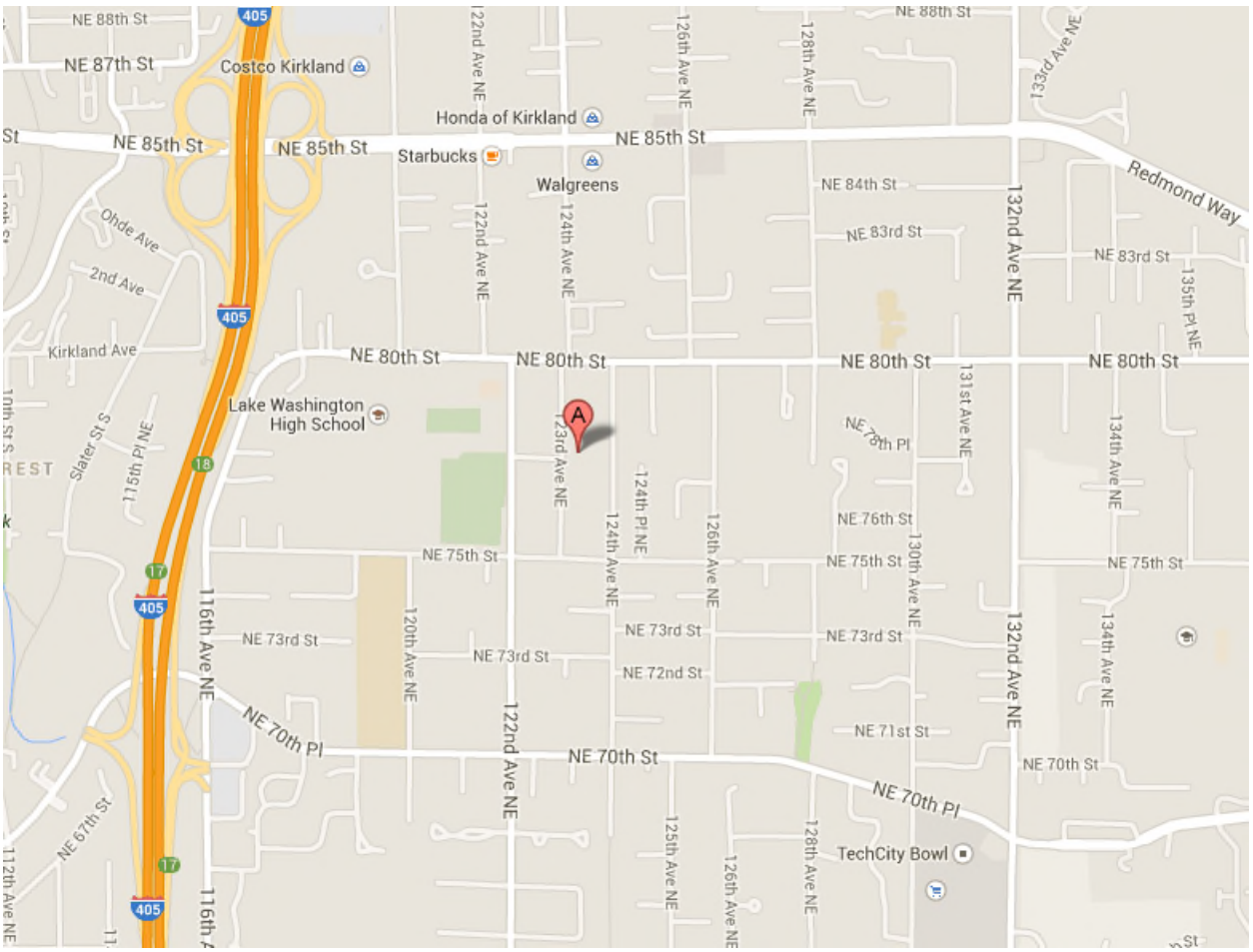
General description of project vicinity:

The project is located on 123rd Ave. NE at NE 78th Street in Kirkland just one block east of Lake Washington High School. The project vicinity is primarily single family residential zoned area (RSX 7.2). The area topography is primarily moderate slopes moderately toward the northwest. The slopes on the project sites are mostly flat with an overall slope of approximately 2%.

Description of proposed project:

Demolish and remove existing single-family home. Subdivide the lot into 2 lots. Construct a new single-family home on each lot. Connect utilities (storm, sanitary sewer, water, power, gas and communication) and build frontage improvements as required which consist of curb and gutter, sidewalk, and storm sewer system along the project frontage connecting to an improved system along NE 78th Street.

Site vicinity map showing location of site, nearby roads, receiving waters, and significant geographical features:



Core Requirements

Req. #1 – Discharge at the Natural Location:

This project consists of one on-site basin that is mostly flat to 2% slopes. The project has been designed to collect all runoff from the new impervious and pervious surfaces proposed on this site and releasing the flows to the onsite conveyance system at a rate no greater than 0.1 cfs over the existing 100-year conditions. This will be done by constructing the driveways to drain toward one side and dispersing the flow toward vegetated area. Pipe drains will collect the downspout runoff from the new structures and connect the runoff to an onsite Drywell (one for each structure).

Over flow will follow existing natural (pre development) conditions and then to the new conveyance system along the project frontage. Runoff from both the existing and developed conditions will be collected along the same system which drains west to a drainage system along NE 78th Street. The proposed drainage design does not create a basin diversion and the entire project lies within a single threshold discharge area.

This project will not have any significant impacts on the existing downstream drainage system. In addition, the necessary erosion control measures will be provided to protect the exposed soil during construction and once final grading is completed.

Req. #2 – Offsite Analysis:

Upstream Analysis: From field observation, review of site survey, and the available aerial topography, it appears that there are very limited locations could contribute offsite flows onto this site. The site is upland from adjacent properties. All surrounding properties contain a single family resident and most runoff appears to sheet flow away from the project site. Therefore, this project will not collect any of the adjacent properties runoff. The site will be graded to direct runoff away from the structure and toward west as in the existing condition.

Downstream Analysis: The project lies in a basin that is tributary to Forbes Creek. From a field investigation and from field topographic mapping it was determined that in the existing condition the slopes on the site generally slope toward the north and east.

Surface runoff from this site if any will be minimal and will collected and directed to the new storm system along the frontage and connected to the existing storm system along NE 78th Street to an existing ditch running north along 122nd Ave. NE. Flows continues north in ditches and pipes under driveways until reaching NE 80th St.

During multiple site visits, no storm drainage issue were observed and no sign of erosion.

Req. #3 – Flow Control:

1. Onsite flow control BMPs:
   The project proposes the use of Drywell. Pipe drains will collect the downspout runoff from the new structures and connect the runoff to an onsite Drywell (one for each structure).

2. Feasibility and applicability of dispersion and infiltration:
   Due to the soil conditions infiltration on the site is limited. The native, Vashon lodgement till sediments are not well suited for infiltration methods due to their in-place density and relatively fine grain size distribution.

3. Soil information:
   See attached Geotechnical Engineering Report prepared September 24, 2014 by South Fork Geosciences.

Req. #4 – Conveyance system

Pipe calculations: No pipe calculations are provided. The expected flow from the site is very low and the project installing the minimum diameter size of 12" pipes.

Req. #5 – Erosion and Sediment Control

1: Mark Clearing Limits

The first step in the "Construction Sequence" included on the clearing and grading plan sheets is for a surveyor to stake the limits of clearing and to have construction or silt fencing placed along the limits prior to any other construction activity.

2: Establish Construction Access

The SWPPP calls for the proposed construction entrance to be installed as the second step after the staking of clearing limits. A detail is provided on the plans.

3: Control Flow Rates

This project will retain as much existing vegetation as possible. In addition, the site proposes to install the future detention facility for use as a sediment pond/tank during construction to manage storm runoff rates.

4: Install Sediment Controls

This site and SWPPP proposes to construct a construction entrance and retain existing vegetation and install CB inlet protection to collect and contain the sediment on this site. These features are intended to minimize the opportunity for sediment to leave the site via stormwater or on vehicles. The construction of these features is one of the first items required in the "Construction Sequence". Mulch will also be used on the exposed soil as necessary to limit erosion.

5: Stabilize Soils

The "Construction Sequence" calls for the stabilization of soils that remain unworked for certain lengths of time based on the time of year. Stabilization techniques may include but not limited to mulching, plastic sheeting or hydroseeding, notes have been added to the plan regarding protection for the stock pile area if necessary.

6: Protect Slopes

All slopes on site during construction are required to be protected with mulch or other means as specified in the construction sequence.

7: Protect Drain Inlets

CB inlet protection will be installed on all new catch basins and yard drains on and adjacent to this project.

8: Stabilize Channels and Outlets

A rock pad will be installed at the new outfall to the existing ditch system within the 131St Street SE R.O.W. In addition, a straw bale check dam will be placed downstream of the outfall to further stabilize the existing channel.

9: Control Pollutants

No outside chemicals are expected to be necessary for the construction of this project. All vehicles working on and around the site would need to meet the State requirements for emissions.

10: Control DeWatering

DeWatering is not expected for this project. If however dewatering was needed, a detention system will be available for holding any dewatering runoff and meter release to the downstream system.

11: Maintain BMPs

The construction supervisor will be responsible for maintaining all BMPs during construction and working with the County to relocate or add BMPs as necessary as site conditions change.

12: Manage the Project

It will be the responsibility of the Contractor and Developer to manage this project and coordinate with the City Inspector and Engineer.

Inspection and Monitoring:

Site inspections shall be done by a person who is knowledgeable in the principles and practices of erosion and sediment control. The person must have skills to first assess the site conditions and construction activities that could impact the quality of stormwater, and second assess the effectiveness of erosion and sediment control measures used to control the quality of stormwater discharges.

Whenever inspection and/or monitoring reveals that the BMPs identified in the Construction SWPPP are inadequate, due to the actual discharge of or potential to discharge a significant amount of any pollutant, appropriate BMPs or design changes

shall be implemented as soon as possible.

Maintaining an Updated Construction SWPPP:
The construction SWPPP shall be retained on-site or within reasonable access to the site.

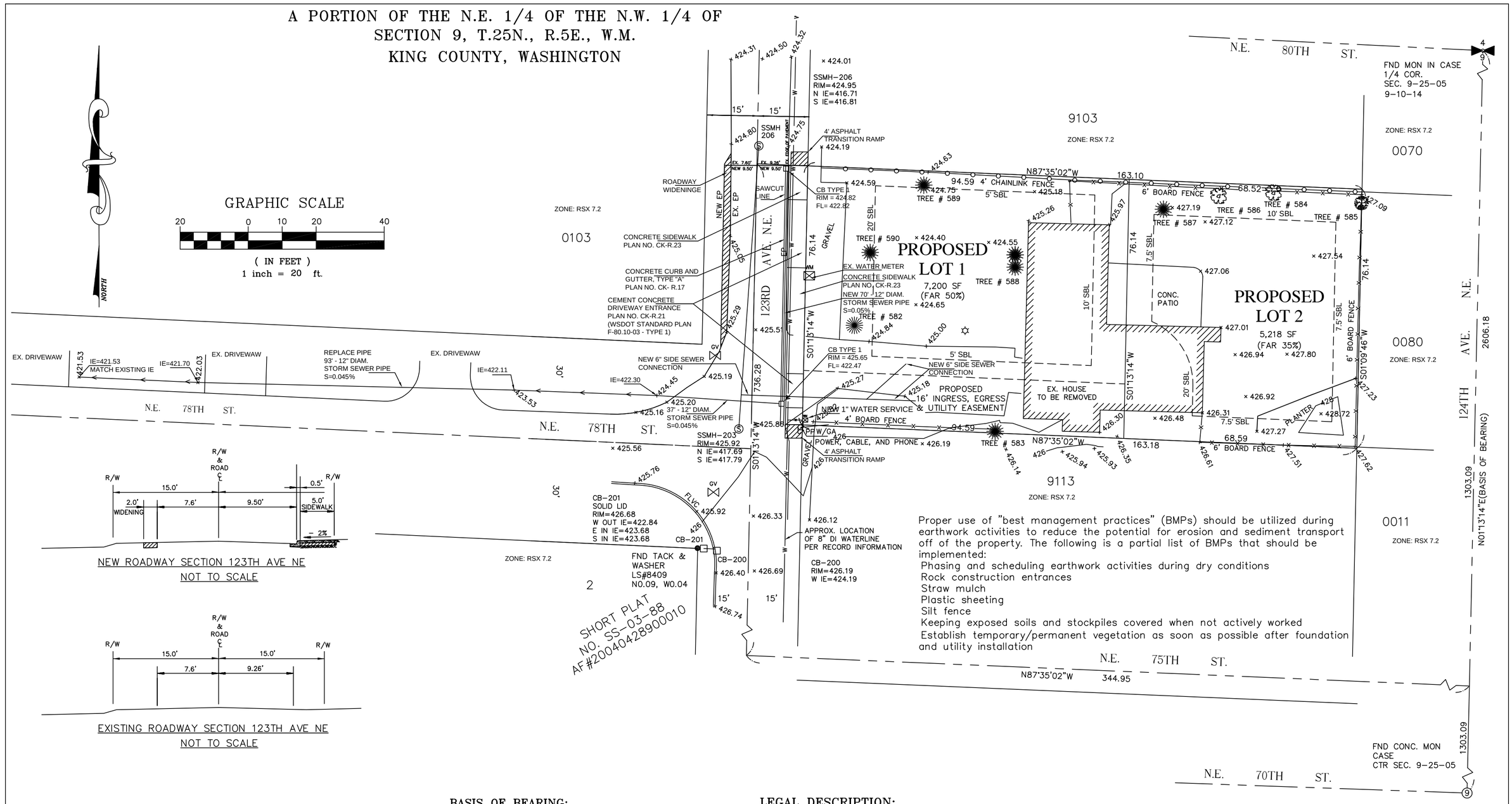
The SWPPP shall be modified whenever there is a change in the design, construction, operation, or maintenance at the construction site that has, or could have, a significant effect on the discharge of pollutants to waters of the state.

The SWPPP shall be modified if, during inspections or investigations conducted by the owner/operator, or the applicable local or state regulatory authority, it is determined that the SWPPP is ineffective in eliminating or significantly minimizing pollutants in stormwater discharges from the site. The SWPPP shall be modified as necessary to include additional or modified BMPs designed to correct problems identified. Revisions to the SWPPP shall be completed within seven days following inspection.

Operation and Maintenance (O&M):

O&M is in accordance with the 2009 King County Surface Water Design Manual.

A PORTION OF THE N.E. 1/4 OF THE N.W. 1/4 OF SECTION 9, T.25N., R.5E., W.M. KING COUNTY, WASHINGTON



NEW ROADWAY SECTION 123TH AVE NE
NOT TO SCALE

EXISTING ROADWAY SECTION 123TH AVE NE
NOT TO SCALE

Proper use of "best management practices" (BMPs) should be utilized during earthwork activities to reduce the potential for erosion and sediment transport off of the property. The following is a partial list of BMPs that should be implemented:

- Phasing and scheduling earthwork activities during dry conditions
- Rock construction entrances
- Straw mulch
- Plastic sheeting
- Silt fence
- Keeping exposed soils and stockpiles covered when not actively worked
- Establish temporary/permanent vegetation as soon as possible after foundation and utility installation

LEGEND

- CATCH BASIN
- SANITARY SEWER MANHOLE
- YARD LIGHT
- WV WATER VALVE
- WM WATER METER
- FIRE HYDRANT
- ICV IRRIGATION CONTROL VALVE
- GV GAS VALVE
- POWER POLE

BASIS OF BEARING:

EAST LINE OF THE NORTHWEST QUARTER OF SECTION 9, TOWNSHIP 25 NORTH, RANGE 5 EAST, EAST LINE BEING NORTH 01°13'14" EAST

INSTRUMENTATION NOTE:

INSTRUMENTATION FOR THIS SURVEY WAS A ONE SECOND TOTAL STATION. PROCEDURES USED IN THIS SURVEY WERE FIELD TRAVERSE, MEETING OR EXCEEDING STANDARDS SET BY WAC 332-130-090.

BENCH MARK – DATUM (NAVD 88)

THE WEST MONUMENT OF 2 MON IN CASES LOCATED AT THE INTERSECTION OF N.E. 80TH ST. AND 124TH AVE. N.E.
ELEV. = 413.98

LEGAL DESCRIPTION:

THE NORTH 76.12 FEET OF THE SOUTH 736.12 FEET OF THAT PORTION OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 9, TOWNSHIP 25 NORTH, RANGE 5 EAST, W.M., IN KING COUNTY, WASHINGTON, LYING EASTERLY OF ANDREEN'S ACRES TRACTS, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 17 OF PLATS, PAGE 45, RECORDS OF KING COUNTY, WASHINGTON.

EXCEPT THAT PORTION THEREOF LYING WITHIN THE EAST HALF OF THE EAST HALF OF THE NORTHEAST QUARTER OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SAID SECTION.

SITUATE IN THE COUNTY OF KING, STATE OF WASHINGTON.

PROJECT INFORMATION:

SITE ADDRESS:	7808 123RD AVE NE KIRKLAND, WA
PARCEL NO.	092505-9017
EXISTING ZONING:	RSX 7.2 SINGLE FAMILY RESIDENTIAL
TOTAL SITE AREA:	12,418 SF
LOTS PROPOSED:	2
LOT 1:	7,200 SF
LOT 2:	5,218 SF

APPLICANT/OWNER:
AHMET KULAGA
1205 130TH ST SE
EVERETT, WA 98208
425-501-6441
KULAGA_A@HOTMAIL.COM

ENGINEER:
MAHER WELAYE, PE
15516 56TH AVE W
EDMONDS, WA 98026
(206) 816-0455
MAHERWELAYE@GMAIL.COM

MAHER WELAYE STATE OF WASHINGTON 33264 REGISTERED PROFESSIONAL ENGINEER
EXPIRES 06-29-__

JACKIE H. STEBERT STATE OF WASHINGTON 14490 REGISTERED PROFESSIONAL LAND SURVEYOR
DATE:_____

Tri-County Land Surveying Company
4610 200th St. S.W. Suite A
Lynnwood, Wa. 98036 (425)776-2926 Fax: 776-2850

DRAWN BY B.H.	DATE SEPTEMBER, 2014	JOB NO. 14-081
CHECKED BY R.S.	SCALE 1" = 20'	SHEET 1 OF 1

AHMET SHORT PLAT

PRE14-01611